DONKEY KONG

OPERATION MANUAL

MODEL NO: TKG2-UP



Nintendo

C O N T E N T S

C A U T I O N S

1. P.C.Board should not be exposed direct to the sun. Direct sunshine is very harmful to LSI(memory element).

2. P.C.Board to be stored or transported should be wrapped by a conductive pouch or aluminum foil, because LSI and IC used in the machine are semiconductor integrated circuits of which basic element is MOS-FET.

3. When images on the Video Monitor screen are disturbed by powerful noise or other electrical causes, turn the main power off once and then on again.

2. SPECIFICATIONS

Power Consumption	:	118W
Size	:	600(W) × 850(D) × 1700(H)mm.
Weight	:	100 Kgs.
Number of Player	:	1 or 2 person(s)
Number of Jumpman	:	3 ~ 6 (Adjustable)
Accessories	:	Operation Manual : 1 copy
		Key for Back Door : 2 pcs.
		Key for Coin Box Door : 2 pcs.
		Fuse : 4 pcs.
		100~120V : 5A × 1, 4A × 2, 0.3A × 1
		220~240V : 4A × 2, 3A × 1, 0.3A × 1

NOTE: Specifications are subject to change for improvement without notice.

3. INSTALLATION OF THE MACHINE

3-1 Cautions on installation

(1) The power cord of the machine should not be connected to a wall outlet together with large load unit(s) such as motor, cooler,etc.

(2) Turn the power off before setting and removing the P.C. Board and connectors. Carefully handle them.

(3) Do not touch IC, LSI and other electronic parts on P.C. Board. Do not use a tester or the like on them. (They may be damaged by the inner voltage of the instruments.)

(4) When exchanging a fuse, use a new one of the prescribed capacity.

(5) The machine should be installed where it is not hot, keeping away from a heating appliance and direct sunshine.

(6) The machine should be installed where it is not wet and dusty.

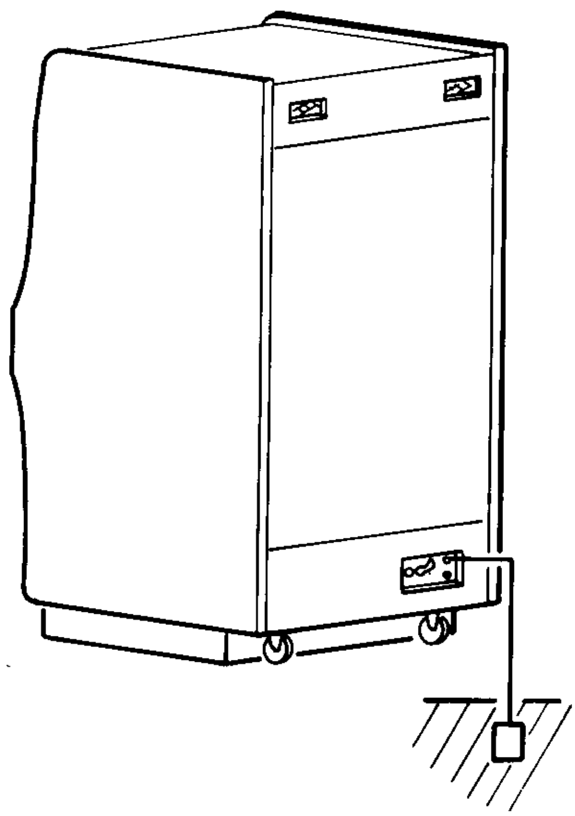
(7) Do not touch the inside of the video monitor which has high tension units. Inform service station, if necessary.

3-2 Earthing of machine

(1) When the machine is installed in a wet place, it should be grounded to avoid accident by an electric shock.

a) Connect an earthing wire to the earthing terminal of the machine.

b) The opposite end of the earthing wire should be connected to an earthing bar which is firmly inserted into the ground.

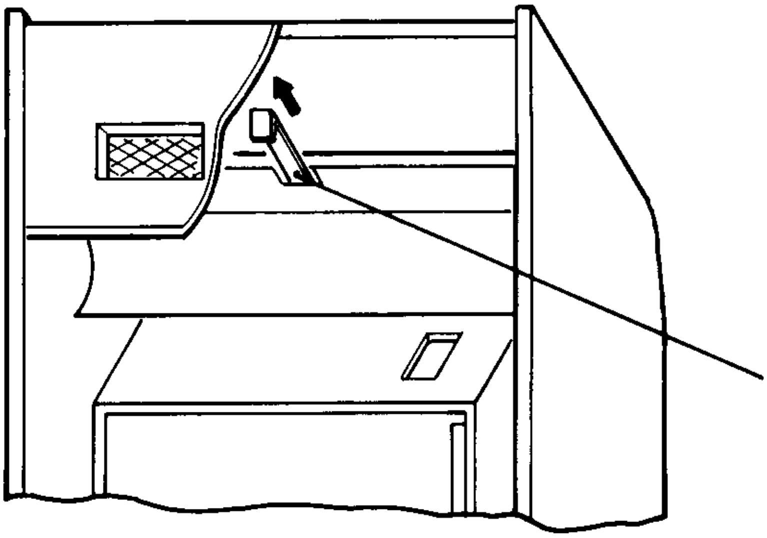


(2) Cautions

a) Do not connect the earthing wire to a water pipe, because polyvinyl-choloride pipes are sometimes used in the water lines and, if so, the electronic continuity is cut at the points.

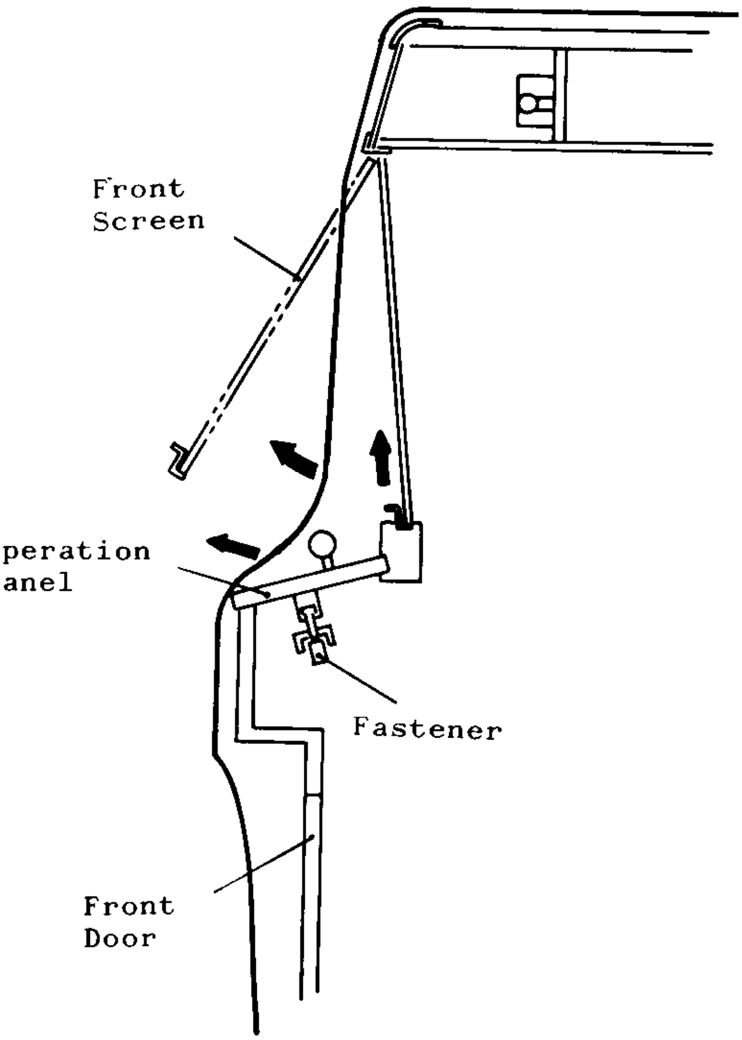
b) Do not connect the earthing wire to the gas pipe absolutely. That is very dangerous.

4. MAINTENANCE AND INSPECTION



4-1 Dismounting of front screen

Opening the back door, pull the front screen clamp which is mounted under the top plate. Pull the front screen upward while pushing and then pull toward you.



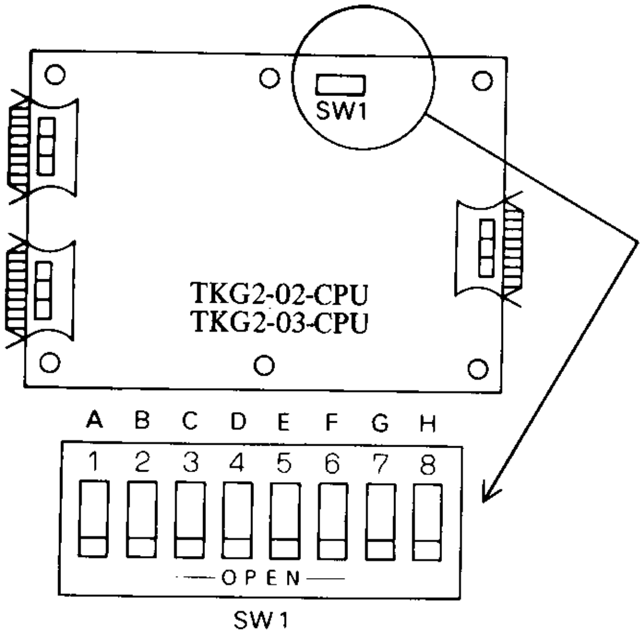
4-2 Dismounting of operation panel

To dismount the operation panel for maintenance or inspection of the Control Unit or Micro Switch, open the front door and unfasten the fastener.

5. POINTS AND METHODS OF ADJUSTMENT

5-1 CPU P.C.Board

The number of Jumpman, score level, the number of coin and type of machine can be set with the switches on CPU P.C.Board according to the diagram below.

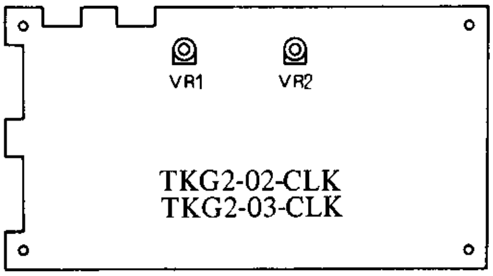


	A	B	C	D	E	F	G	H
Number of Jumpman								
3	OFF	OFF						
4	ON	OFF						
5	OFF	ON						
6	ON	ON						
Score Level for extra Jumpman								
7,000 points			OFF	OFF				
10,000 points			ON	OFF				
15,000 points			OFF	ON				
20,000 points			ON	ON				
Coinage								
1 coin /1 play					OFF	OFF	OFF	
1 coin /2 plays					OFF	ON	OFF	
1 coin /3 plays					OFF	OFF	ON	
1 coin /4 plays					OFF	ON	ON	
2 coins/1 play					ON	OFF	OFF	
3 coins/1 play					ON	ON	OFF	
4 coins/1 play					ON	OFF	ON	
5 coins/1 play					ON	ON	ON	
Table/Upright								
Table								OFF
Upright								ON

NOTE : Keep the switch H always at the ON position.

5-2 CLK P.C. Board

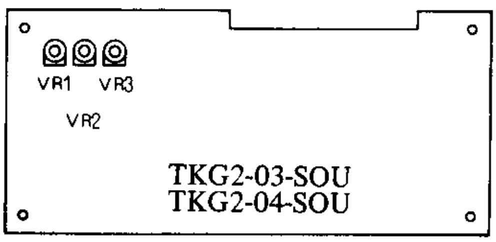
Semi-fixed resistors, VR1 and VR2 on CLK P.C. Board are used to adjust video monitor screen.



VR1	50KΩ 0.3W top type white knob	Turn right to move image downward.
VR2	50KΩ 0.3W top type white knob	Turn right to move image leftward

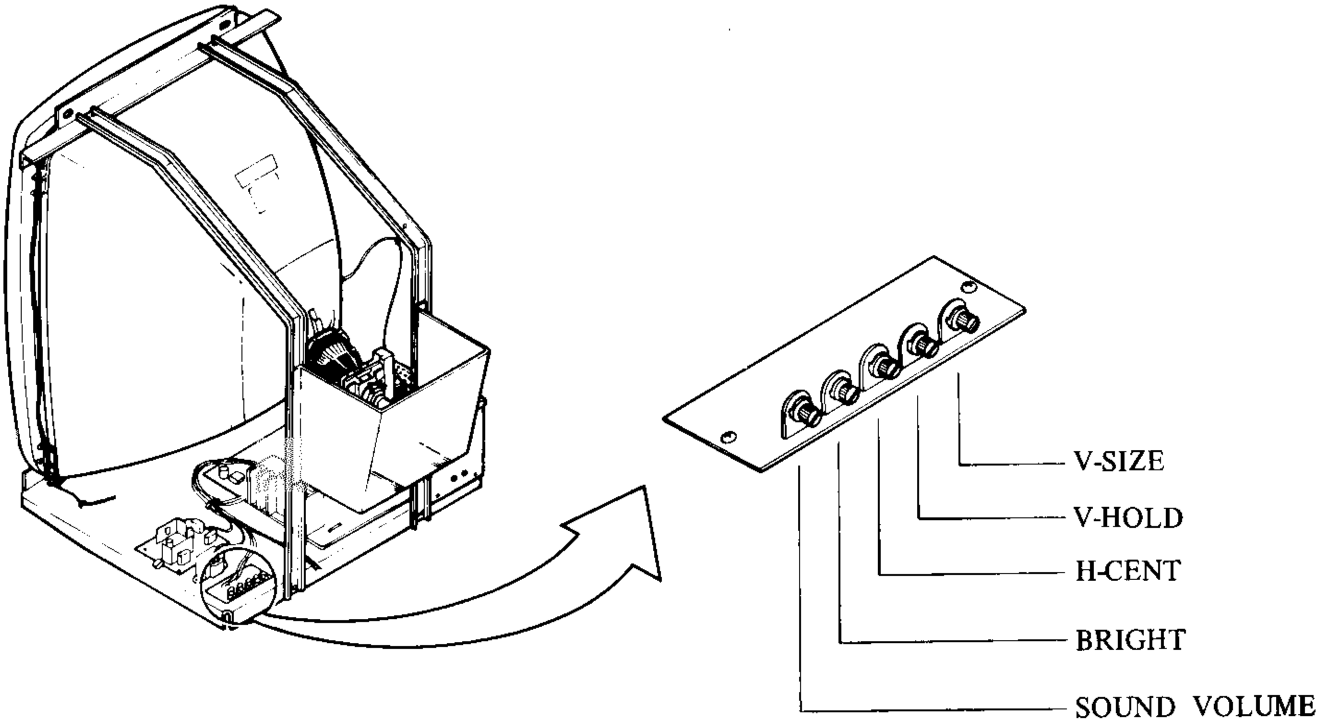
5-3 SOU P.C. Board

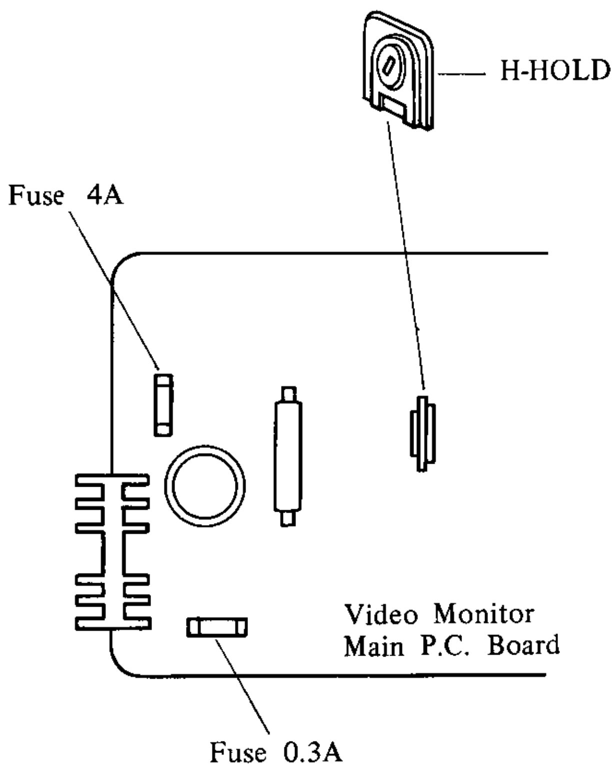
Semi-fixed resistor VR1 on SOU P.C. Board is used to adjust sound balance.



VR1	10KΩ 1/5W plain type white knob	Balance of effective sound

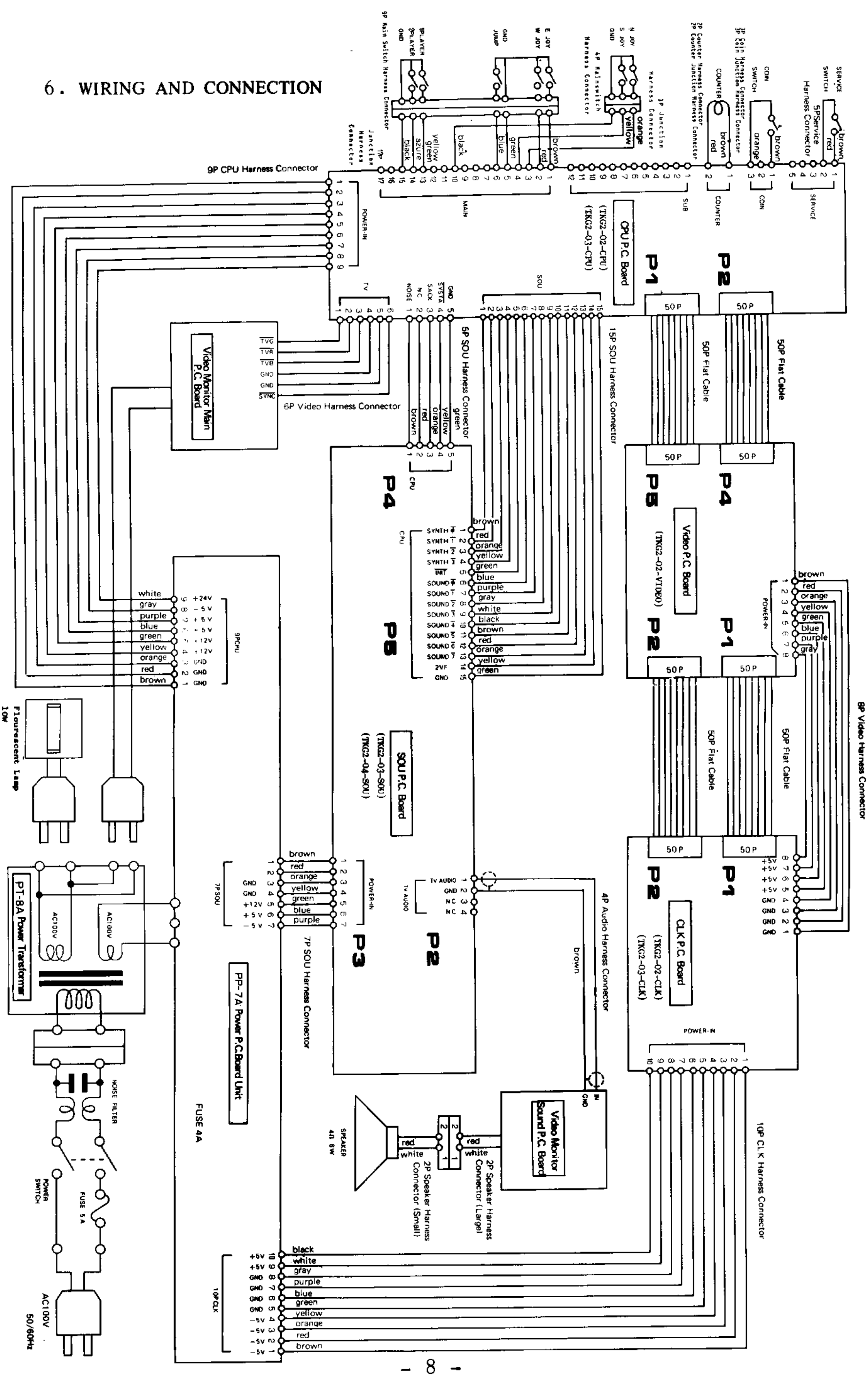
5–4 VIDEO MONITOR





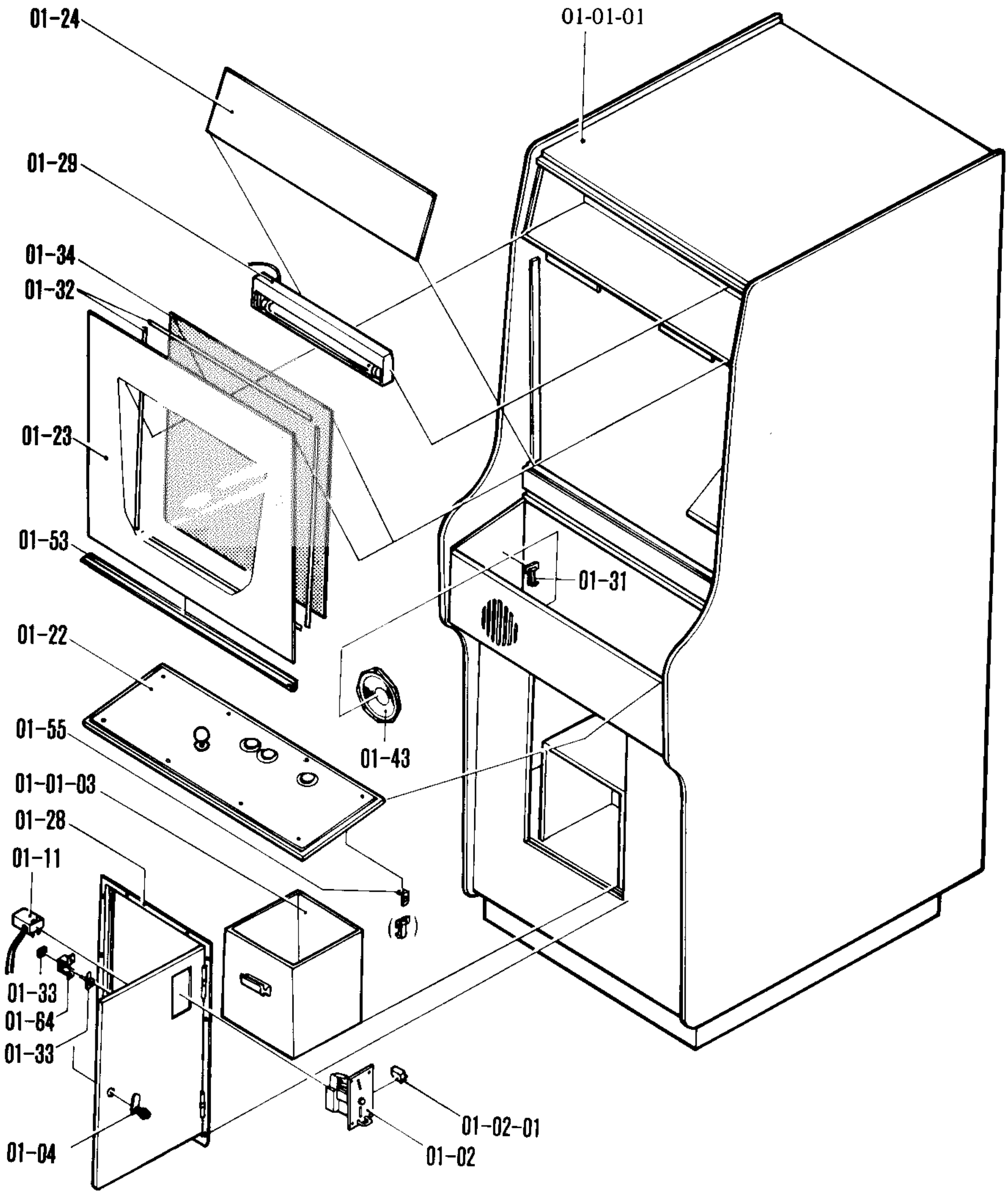
NOTE : Do not touch the inside of the Video Monitor in which many parts are supplied with high tension.

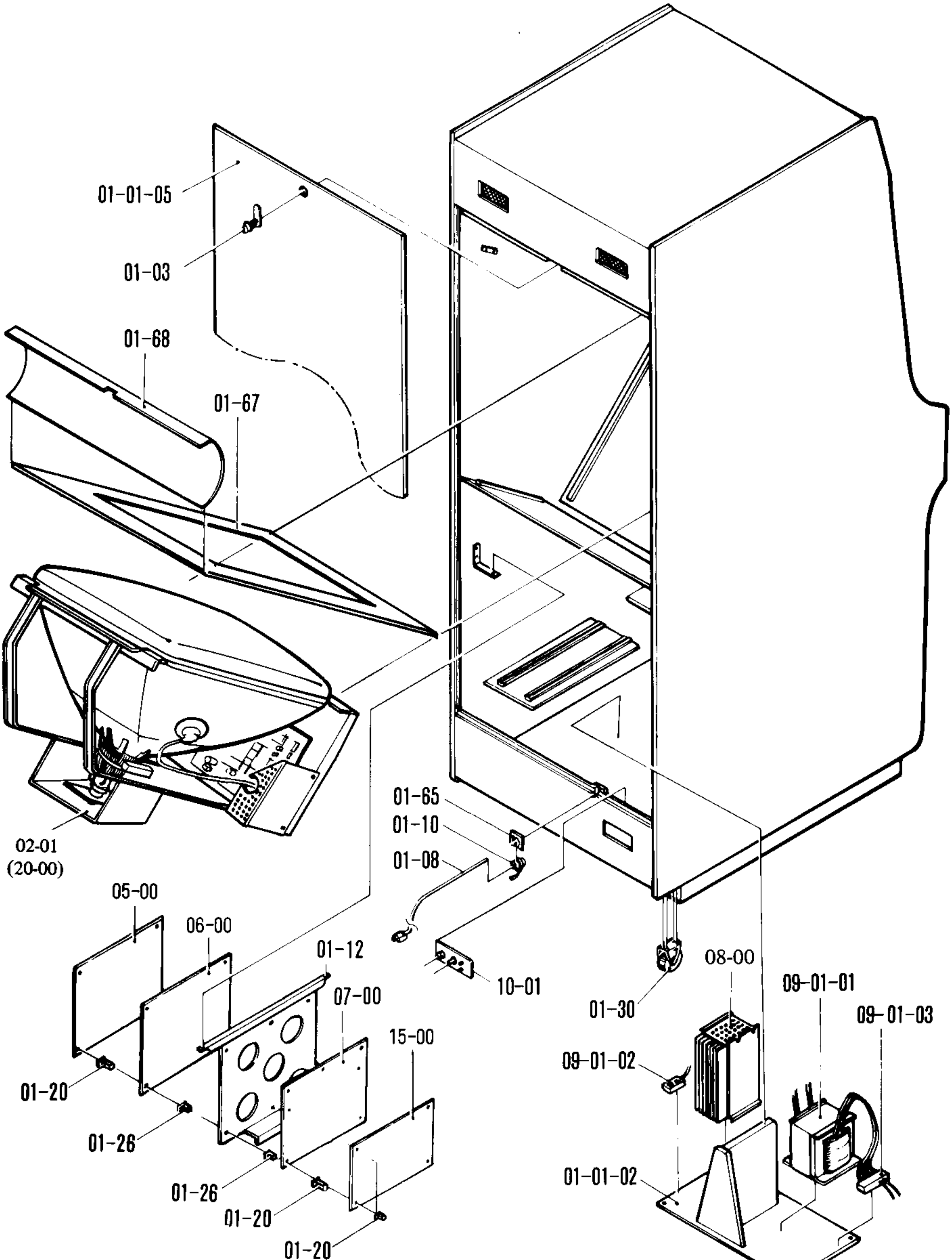
6. WIRING AND CONNECTION



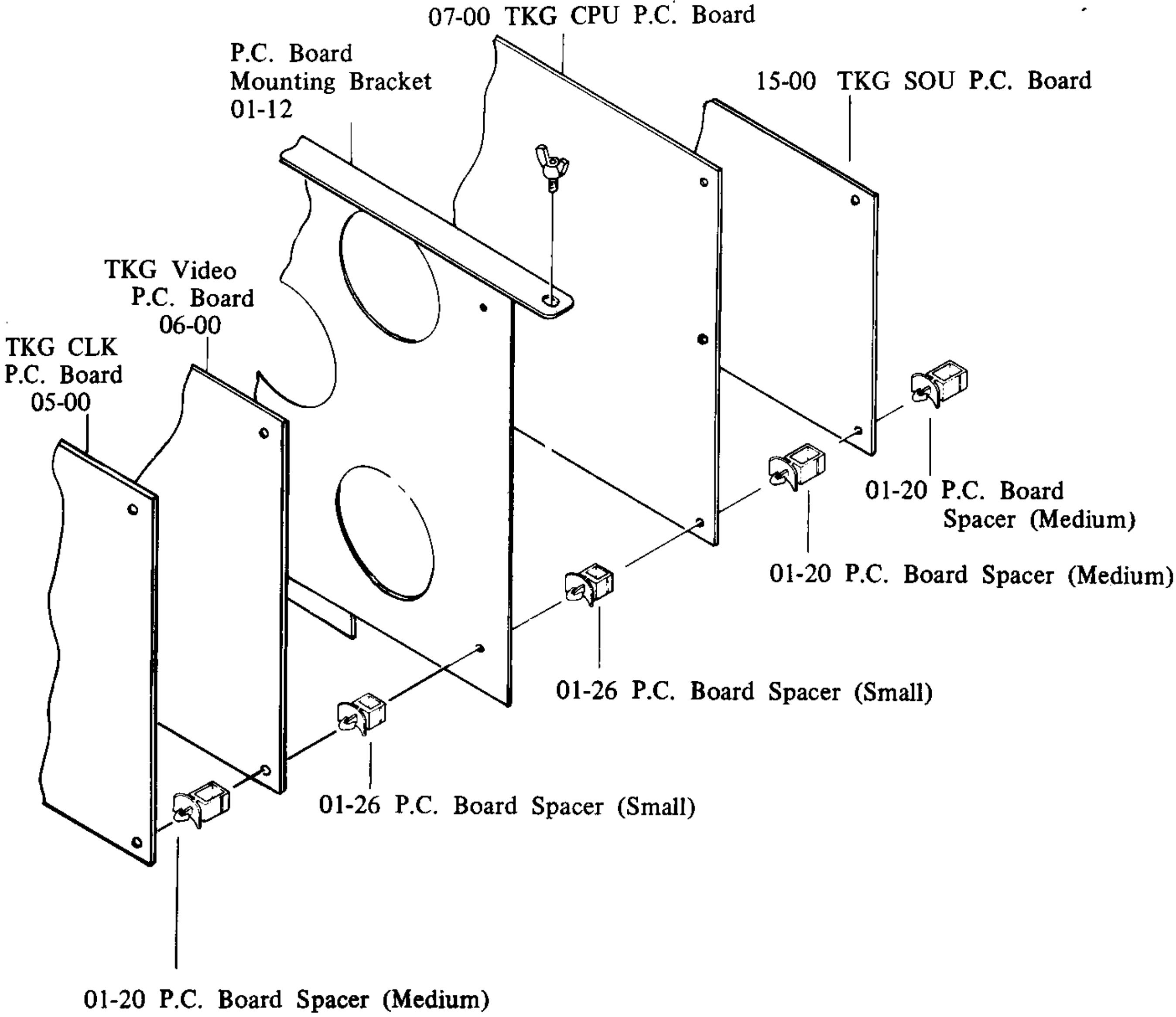
7. NAME OF EACH PART

(1) Body



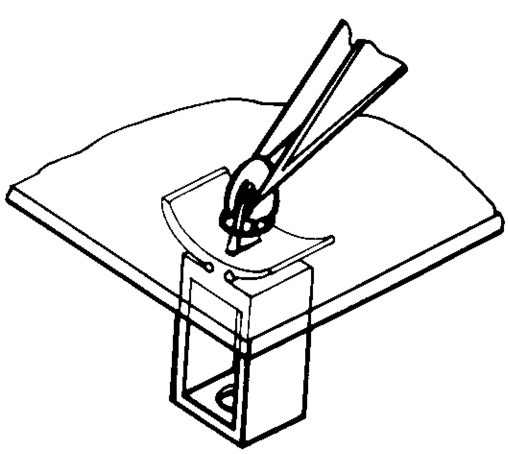

01-01-05
01-03
01-68
01-67
02-01
(20-00)
05-00
06-00
01-12
07-00
15-00
01-20
01-26
01-26
01-20
01-20
01-65
01-10
01-08
10-01
01-30
08-00
09-01-01
09-01-03
09-01-02
01-01-02

(2) P.C. Board

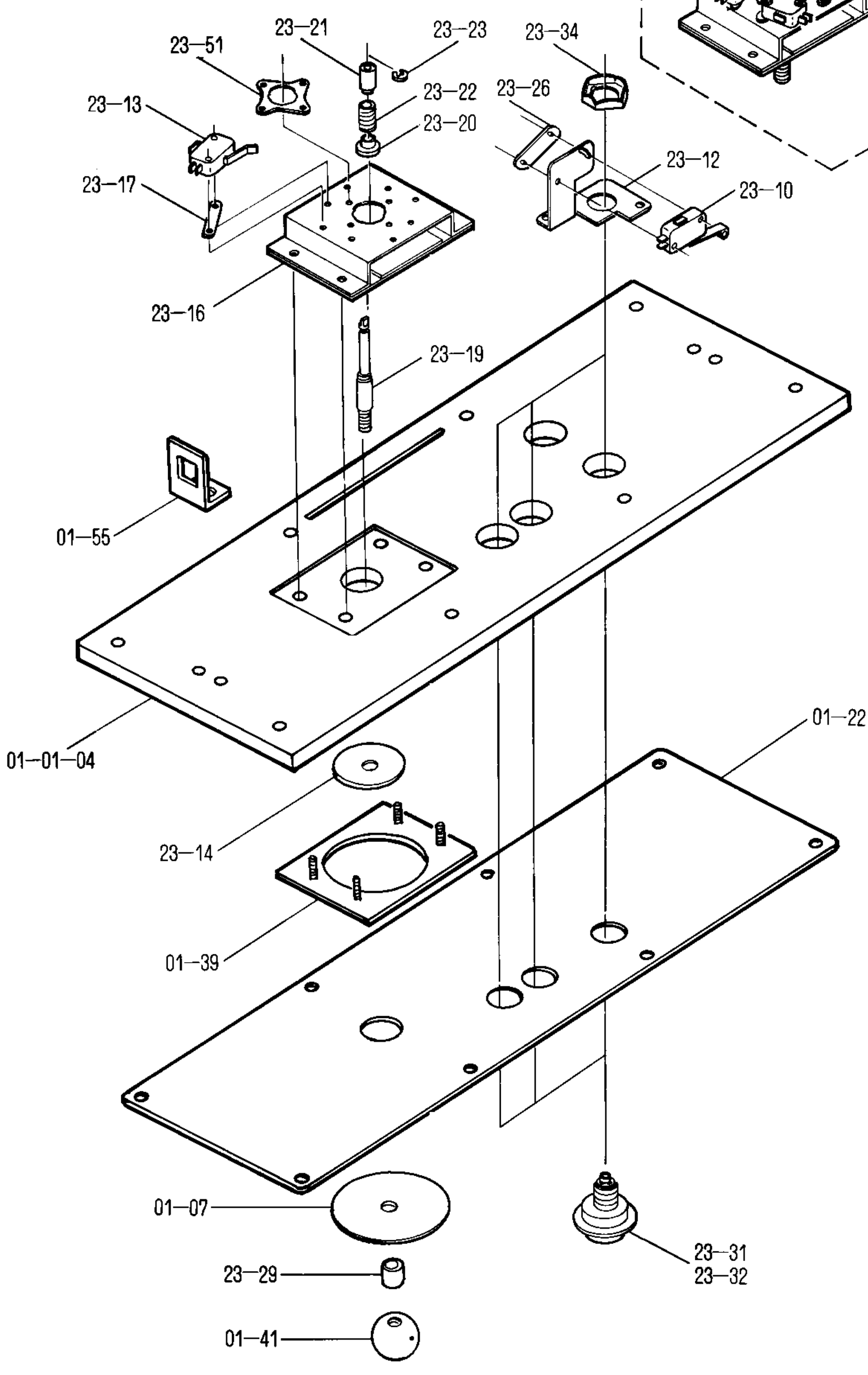


Removing P.C. Board Spacer

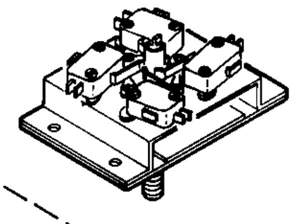
Press the claw with a pincette, as illustrated, and pull out the P.C. Board.



(3) Operation Panel Assembly



23-50 4 Way Control Lever A'ssy



8. PARTS LIST

1. **Body**

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKGU-01-01-01	Body	1		
TKGU-01-01-02	Transformer Base	1		
TKGU-01-01-03	Cash Box	1		
TKGU-01-01-04	Control Lever A'ssy Base	1		
TKGU-01-01-05	Back Door	1		
TKGU-01-02	Coin Selector	1	T	
TKGU-01-02-01	Coin Switch	1	T	
TKGU-01-03	Back Door Lock	1		
TKGU-01-04	Front Door Lock	1		
TKGU-01-08	Power Cord	1		
TKGU-01-10	Strain Relief Bushing	1	T	
TKGU-01-11	Game Counter	1	T	
TKGU-01-12	P.C. Board Mounting Bracket	1	T	
TKGU-01-20	P.C. Board Spacer (Medium)	16	T	
TKGU-01-22	Operation Panel	1		
TKGU-01-23	Front Screen	1		
TKGU-01-24	Name Plate	1		
TKGU-01-26	P.C. Board Spacer (Small)	10	T	
TKGU-01-28	Front Door Ass'y	1		
TKGU-01-29	Fluorescent Lamp A'ssy	1		
TKGU-01-30	Caster	2		
TKGU-01-31	Operation Panel A'ssy Fastener (A)	2		
TKGU-01-32	Adhesive Tape		1.9m	
TKGU-01-33	Service Switch	1	T	
TKGU-01-34	Screen Filter	1		
TKGU-01-39	Control Lever A'ssy Mounting Plate	1		
TKGU-01-41	Control Lever Knob	1		
TKGU-01-43	Speaker	1		
TKGU-01-53	Front Screen Frame (Lower)	1		
TKGU-01-55	Operation Panel A'ssy Fastener (B)	2		
TKGU-01-64	Service Switch Bracket	1		
TKGU-01-65	Strain Relief Bushing Plate	1		
TKGU-01-67	Blind Cardboard (Large)	1		
TKGU-01-68	Blind Cardboard (Small)	1		
TKGU-01-70	Control Knob Plate	1		

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKGU-05-00	CLK P.C. Board	1	T (TKG2-03-CLK) (TKG2-02-CLK)	
TKGU-06-00	Video P.C. Board	1	T (TKG2-02-VIDEO)	
TKGU-07-00	CPU P.C. Board	1	T (TKG2-02-CPU) (TKG2-03-CPU)	
TKGU-15-00	SOU P.C. Board	1	T (TKG2-03-SOU) (TKG2-04-SOU)	
TKGU-08-00	(PP-7A) Power P.C. Board	1	T	
TKGU-09-01-01	(PT-8A) Power Transformer	1		
TKGU-09-01-02	2P Table Tap	1		
TKGU-09-01-03	Terminal Block	1		
TKGU-10-01	Power Switch A'ssy	1		
TKGU-13-01	10P CLK Harness Connector	1	T	
TKGU-13-02	2P Counter Harness Connector	1		
TKGU-13-03	9P CPU Harness Connector	1	T	
TKGU-13-04	3P Coin Harness Connector	1		
TKGU-13-05	5P Service Harness Connector	1		
TKGU-13-06	2P Speaker TV Harness Connector	1		
TKGU-13-07	4P-750 Audio Harness Connector	1		
TKGU-13-10	9P Main Switch Harness Connector	1		
TKGU-13-11	17P Junction Harness Connector	1		
TKGU-13-12	50P Flat Cable	4	T	
TKGU-13-13	8P Video Harness Connector	1	T	
TKGU-13-14	7P SOU Harness Connector	1	T	
TKGU-13-17	2P Speaker Harness Connector	1		
TKGU-13-24	15P SOU Harness Connector	1	T	
TKGU-13-25	5P SOU Harness Connector	1	T	
TKGU-13-28	3P Junction Harness Connector	1		
TKGU-13-29	4P Main Switch Harness Connector	1		
TKGU-13-31	6P-1000 Video Harness Connector	1		
TKGU-13-32	2P Counter Junction Harness Connector	1		
TKGU-13-33	3P Coin Junction Harness Connector	1		
TKGU-20-00	Video Monitor	1	(20–5F)	
TKGU-23-10	Micro Switch	1		
TKGU-23-12	Switch Button Bracket	4		
TKGU-23-13	Control Switch	1	T	
TKGU-23-14	Blind Plate	1	T	
TKGU-23-16	Bearing Bracket	1	T	

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKGU-23-17	Switch Spacer	4	T	
TKGU-23-19	Shaft	1	T	
TKGU-23-20	Spring Stopper	1	T	
TKGU-23-21	Switch Collar	1	T	
TKGU-23-22	Lever Spring	1	T	
TKGU-23-23	E Ring 4	1	T	
TKGU-23-26	Nut Plate	4		
TKGU-23-29	Control Knob Collar	1	T	
TKGU-23-31	Switch Button A'ssy (Blue)	3		
TKGU-23-32	Switch Button A'ssy (Orange)	1		
TKGU-23-34	Pal Nut	4		
TKGU-23-50	4 Way Control Lever A'ssy	1	T	
TKGU-23-51	4 Way Guide Plate	1	T	

T : Parts which is also used with the Table Model.

2. CLK P.C. Board

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKG-05-00B	CLK P.C. Board	1	Complete Set	
TKG-05-01	IC 10101	1	Quadruple OR/NOR Gates	
TKG-05-02	IC 10104	4	Quadruple 2-Input AND Gates	
TKG-05-03	IC 10105	8	Triple 2-3-2-Input OR/NOR Gates	
TKG-05-04	IC 10107	6	Triple 2-Input Exclusive-OR/NOR Gates	
TKG-05-05	IC 10109	1	Dual 4-5-Input OR/NOR Gates	
TKG-05-06	IC 10116	1	Triple Line Receivers	
TKG-05-08	IC 10124	6	Quadruple TTL-to-ECL Translators	
TKG-05-09	IC 10125	6	Quadruple ECL-to-TTL Translators	
TKG-05-10	IC 10131	2	Dual Type-D Master-Slave Flip Flops	
TKG-05-11	IC 10133	4	Quadruple Latches	
TKG-05-12	IC 10135	2	Dual J-K Master-Slave Flip-Flop	
TKG-05-13	IC 10136 with radiator fin(L)	7	Universal Hexadecimal Counter	
TKG-05-14	IC 10174	6	Dual 4-to-1 Multiplexers	
TKG-05-15	IC SN74LS02	1	Quadruple 2-Input Positive NOR Gate	
TKG-05-16	IC SN74LS04	1	Hex Inverter	
TKG-05-17	IC SN74LS10	1	Tri 3-Input NAND Gate	
TKG-05-18	IC SN74LS74	2	Dual D-Type Edge-Triggered Flip-Flop W/Set and Reset	
TKG-05-19	IC SN74LS86	2	Quadruple 2-Input Exclusive OR Gate	
TKG-05-20	IC SN74LS161/163	2	Synchronous Presettable 4-Bit Counter with Clear	
TKG-05-21	IC SN74LS164	6	8 Bit Serial-In Parallel-Out Shift Register	
TKG-05-22B	IC MB7072 E/N with radiator fin(S)	4	256X4 Bit ECL RAM	
TKG-05-23	Electrolytic Capacitor	2	100μF 16V	
TKG-05-24	Ceramic Capacitor	86	0.01μF 50V	
TKG-05-26B	Ceramic Capacitor	2	220pF 50V	
TKG-05-27	Ceramic Capacitor	2	10pF 50V	
TKG-05-28	Ceramic Capacitor	2	33pF 50V	
TKG-05-29B	Resistor	1	330Ω ¼W ± 5%	
TKG-05-30B	Resistor	49	510Ω ¼W ± 5%	
TKG-05-32B	Resistor	6	1KΩ ¼W ± 5%	
TKG-05-33B	Resistor	2	2.2KΩ ¼W ± 5%	

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKG-05-34 B	Resistor	1	10KΩ ¼W ± 5%	
TKG-05-35 B	Resistor	2	15KΩ ¼W ± 5%	
TKG-05-36 B	Resistor	1	20KΩ ¼W ± 5%	
TKG-05-37 B	Resistor	1	51KΩ ¼W ± 5%	
TKG-05-38	Transistor	2	2SC1215-R/S/T	
TKG-05-39	Choke Coil	1	ST-501339	
TKG-05-40	Toroidal Transformer	1	ST-501340	
TKG-05-41	Crystal Oscillator	1	ST-501338	
TKG-05-42	Resistor Array	14	EXB-P88-511J	
TKG-05-43	IC SN74 LS123	2	Dual Retriggerable Single shot	
TKG-05-44	Polyester Film Capacitor	1	ECQMIH 0.001μF 102KZ	
TKG-05-45	Polyester Film Capacitor	1	ECQMIH 0.022μF 223KZ	
TKG-05-46	Polyester Film Capacitor	1	ECQMIH 0.1μF 104KZ	
TKG-05-47	Resistor (Carbon)	1	200Ω ¼W ± 5%	
TKG-05-48	Resistor (Carbon)	2	4.7KΩ ¼W ± 5%	
TKG-05-49	Resistor (Carbon)	2	22KΩ ¼W ± 5%	
TKG-05-50	Variable Resistor	2	EVL-V0A00-B54 50KΩ 1/3W	

3. Video P.C. Board

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKG-06-00B	Video P.C. Board	1	Complete Set	
TKG-06-01	IC SN74LS04	1	Hex Inverter	
TKG-06-02	IC SN74LS08	1	Quadruple 2-Input Positive AND Gate	
TKG-06-03	IC SN74LS20	2	Dual 4-Input Positive NAND Gate	
TKG-06-04	IC SN74LS74	1	Dual D-Type Edge-Triggered Flip-Flop W/Set and Reset	
TKG-06-05	IC SN74LS86	2	Quadruple 2-Input Executive OR Gate	
TKG-06-06	IC SN74LS139	1	Dual 2-to 4-line Decoder/Demultiplexer	
TKG-06-07	IC SN74LS157	9	Quadruple 2-line to 1-line Data Selector/ Multiplexer	
TKG-06-08	IC SN74LS174	1	Hex D-Type Flip-Flop W/Reset	
TKG-06-09	IC SN74LS194	4	4-Bit Shift Register	
TKG-06-10	IC SN74LS245	2	Octal 3 State Bus Transceivers	
TKG-06-11	IC SN74LS273	2	Octal D-FFS	
TKG-06-12	IC SN74LS283	4	4 Bit Binary Full Adder	
TKG-06-13	IC SN74LS367	2	Hex Bus Driver W/3 State Output	
TKG-06-14	IC SN74LS373	1	Octal 3-State D-latches	
TKG-06-15	IC SN74S02	1	Quad 2 Input NOR Gate	
TKG-06-16	IC SN74S86	1	Quad 2 Input EX-OR Gate	
TKG-06-17	IC SN74S157	1	2 to 1 Data Selectors	
TKG-06-18	IC SN74S194	8	4-Bit Shift Register	
TKG-06-20	IC 2114	2	1024X 4-Bit Static MOS RAM	
TKG-06-21	IC 2148-6	2	1024X 4-Bit Static MOS RAM	
TKG-06-22	IC 2716 (390ns)	4	2048X 8 Bit EP ROM	
TKG-06-23	IC 2716 (450ns)	2	2048X 8 Bit EP ROM	
TKG-06-24B	IC MB 7052	1	256X4 Bit Bipolar P-ROM	
TKG-06-25	Resistor	7	1KΩ ¼W ± 5%	
TKG-06-26	Electrolytic Capacitor	1	100μF 16V	
TKG-06-27	Ceramic Capacitor	33	0.1μF 50V	
TKG-06-28	IC SN74LS10	1	Tri 3 Input NAND Gate	
TKG-06-29	IC SN74LS85	2	4-Bit Magnitude Comparator	
TKG-06-30	IC SN74LS175	1	Quadruple D-FFs	
TKG-06-31	IC SN74LS293	1	Binary Counter	
TKG-06-32	IC SN74LS393	1	Dual 4-Bit Binary Counters Gate	
TKG-06-33	IC SN74S 32	1	Quadruple 2 Input OR	
TKG-06-34	IC SN74S 175	2	Quadruple D-FFs	

4. CPU P.C. Board

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKG-07-00B	CPU P.C. Board	1	Complete Set	
TKG-07-01	IC 2114	6	1024X4 Bit Static MOS RAM	
TKG-07-04	IC SN74LS00	1	Quadruple 2-Input Positive NAND Gate	
TKG-07-05	IC SN74LS02	3	Quadruple 2-Input Positive NOR Gate	
TKG-07-06	IC SN74LS04	7	Hex Inverter	
TKG-07-07	IC SN74LS08	2	Quadruple 2-Input Positive AND Gate	
TKG-07-08	IC SN74LS32	1	Quadruple 2-Input Positive OR Gate	
TKG-07-09	IC SN74LS74	2	Dual D-Type Edge-Triggered Flip-Flop W/Set and Reset	
TKG-07-10	IC SN74LS123	1	Dual Retriggerable Single Shot	
TKG-07-11	IC SN74LS125	1	Quadruple 3 State Bus Buffers	
TKG-07-12	IC SN74LS132	1	Quadruple 2 Input NAND Schmit Triggers	
TKG-07-13	IC SN74LS138	6	3-to 8-Line Decoder/Demultiplexer	
TKG-07-14	IC SN74LS139	1	Dual 2-to 4-Line Decoder/Demultiplexer	
TKG-07-15	IC SN74LS174	2	Hex D-Type Flip-Flop W/Reset RAM	
TKG-07-16	IC SN74LS175	2	Quadruple D-Type Flip-Flop W/Reset	
TKG-07-17	IC SN74LS240	4	Octal Buffer/Line Driver/Line Receiver W/3-State Output	
TKG-07-18	IC SN74LS245	1	Octal 3-State Bus Transceivers	
TKG-07-19	IC SN74LS259	2	8-Bit Addressable Latches	
TKG-07-20	IC SN74LS367	5	Hex Bus Driver W/3 State Output	
TKG-07-21	IC MB7052	2	Bipolar ROM 256X 4-Bit	
TKG-07-22	IC Z 80A	1	8-Bit Microprocessor	
TKG-07-23	IC I 8257-5	1	DMA Controller	
TKG-07-24	IC 2532	4	4096X 8-Bit EP ROM	
TKG-07-25	Electrolytic Capacitor	1	1μF 50V	
TKG-07-26	Electrolytic Capacitor	1	47μF 16V	
TKG-07-27	Electrolytic Capacitor	3	100μF 16V	
TKG-07-28	Ceramic Capacitor	3	0.01μF 50V	
TKG-07-29	Ceramic Capacitor	41	0.1μF 50V	
TKG-07-30	Tantalum Capacitor	15	10μF 16V	
TKG-07-31B	Resistor Array	6	68Ω ¼W ± 5%	
TKG-07-32B	Resistor Array	3	1KΩ ¼W ± 5%	
TKG-07-33B	Resistor Array	1	4.7KΩ ¼W ± 5%	

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKG-07-35B	Resistor	2	680Ω ¼W ± 5%	
TKG-07-36B	Resistor	1	360Ω ¼W ± 5%	
TKG-07-37B	Resistor	1	18KΩ ¼W ± 5%	
TKG-07-38B	Resistor	1	30KΩ ¼W ± 5%	
TKG-07-39	Resistor	6	68Ω ¼W ± 5%	
TKG-07-40	Resistor	3	100Ω ¼W ± 5%	
TKG-07-41	Resistor	1	200Ω ¼W ± 5%	
TKG-07-42	Resistor	4	220Ω ¼W ± 5%	
TKG-07-43	Resistor	7	330Ω ¼W ± 5%	
TKG-07-44B	Resistor	8	470Ω ¼W ± 5%	
TKG-07-45	Resistor	8	1KΩ ¼W ± 5%	
TKG-07-46B	Resistor	1	2.2KΩ ¼W ± 5%	
TKG-07-47	Resistor	1	2KΩ ¼W ± 5%	
TKG-07-48	Resistor	8	4.7KΩ ¼W ± 5%	
TKG-07-49	Resistor	1	7.5KΩ ¼W ± 5%	
TKG-07-50	Resistor	4	10KΩ ¼W ± 5%	
TKG-07-51B	Resistor	1	68KΩ ¼W ± 5%	
TKG-07-52	Resistor	2	33KΩ ¼W ± 5%	
TKG-07-53B	Resistor	1	75KΩ ¼W ± 5%	
TKG-07-54	Transistor	1	2SO1384-R	
TKG-07-55	Transistor	2	2SA564-Q/R	
TKG-07-56	Transistor	5	2SC828-P/Q/R	
TKG-07-57	Diode	1	IS1885	
TKG-07-58B	Diode	5	IS1953	
TKG-07-59B	Dip Switch	1	DCC-8P	
TKG-07-60	Resistor (Carbon)	1	75KΩ ¼W ± 5%	
TKG-07-61	Resistor (Carbon)	1	91KΩ ¼W ± 5%	
TKG-07-62	Resistor (Carbon)	1	390KΩ ¼W ± 5%	
TKG-07-63	Resistor (Carbon)	2	560KΩ ¼W ± 5%	
TKG-07-64	IC SN74LS86	2	Quadruple 2-Input EX-OR Gate	
TKG-07-65	IC SN74LS164	1	8-Bit Shift Register	
TKG-07-66	IC SN74LS373	2	Octal 3-State D-Latches	
TKG-07-67	IC CD4049 UB	1	Hex Buffer/Converter	
TKG-07-68	IC CD4066B	3	Quadruple Bilateral Switch	
TKG-07-69	Electrolytic Capacitor	1	22μF 16V	
TKG-07-70	Electrolytic Capacitor	1	33μF 16V	
TKG-07-71	Electrolytic Capacitor	2	3.3μF 16V No Polarity-Type	
TKG-07-72	Electrolytic Capacitor	1	0.47μF 50V No Polarity-Type	

5. Power P.C. Board Unit

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKG-08-00	Power P.C. Board	1	Complete Set	
TKG-08-01	Transistor	4	2SC2535 OR 2SC2335	
TKG-08-02	Transistor	4	2SA817	
TKG-08-03	Transistor	1	2SA1015	
TKG-08-04	Fast Recovery Center Tap Diode	1	5GG2C41	
TKG-08-05	Shot Key Diode	2	15FWJ2C1 OR 30FWJ2C1	
TKG-08-06	Silicon Rectifier Diode	1	1B4B41	
TKG-08-07	Silicon Rectifier Diode	1	S4VB40 4A 400VW	
TKG-08-08	Hybrid IC	2	3D-1000	
TKG-08-09	3 Terminals Regulators	1	78M24 0.5A 24VW	
TKG-08-10	3 Terminals Regulators	1	7812 1A 12VW	
TKG-08-11	Thyristors	1	5P4M	
TKG-08-12	Thyristors	1	03P05M	
TKG-08-13	Diode	4	IS1835	
TKG-08-14	Diode	9	IS954	
TKG-08-15	Diode	1	IS1588	
TKG-08-16	Photo Coupler	1	PS2002	
TKG-08-17	Zener Diode	4	1Z27 OR RD27FB	
TKG-08-18	Zener Diode	2	05Z5.6V (05Z5.6L, RD5.6EB)	
TKG-08-19	Zener Diode	1	05Z13V (05Z15L)	
TKG-08-20	Zener Diode	1	05Z27V (RD27EC OR RD30EB)	
TKG-08-21	Ceramic Capacitor	3	DE0707B471K2K 470pF 2KV	
TKG-08-22	Ceramic Capacitor	2	DE0707B221K2K 220pF 2KV	
TKG-08-23	Film Capacitor	7	MDD2J473M 0.047μF 630VW	
TKG-08-24	Aluminium Electrolytic Capacitor	2	330μF 200VW 105°C	
TKG-08-25	Aluminium Electrolytic Capacitor	8	2200μF 10V	
TKG-08-26	Aluminium Electrolytic Capacitor	1	470μF 50V	
TKG-08-27	Aluminium Electrolytic Capacitor	1	470μF 25V	
TKG-08-28	Aluminium Electrolytic Capacitor	1	10μF 16V	
TKG-08-29	Aluminium Electrolytic Capacitor	13	47μF 16V	
TKG-08-30	Aluminium Electrolytic Capacitor	1	47μF 35V	
TKG-08-31	Aluminium Electrolytic Capacitor	5	10μF 50V	

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKG-08-32	Film Capacitor	1	0.01μF 50V	
TKG-08-33	Film Capacitor	2	1000pF 50V	
TKG-08-34	Resistor (Coil Winding)	1	22Ω 5W ± 10%	
TKG-08-35	Resistor (Carbon)	3	100Ω ½W± 5%	
TKG-08-36	Resistor (Carbon)	5	1KΩ ¼W± 5%	
TKG-08-37	Resistor (Carbon)	10	51Ω ¼W± 5%	
TKG-08-38	Resistor (Metal Oxide)	2	1KΩ 2W ± 10%	
TKG-08-39	Resistor (Carbon)	6	12Ω ½W± 5%	
TKG-08-40	Resistor (Carbon)	1	2.4KΩ ¼W± 5%	
TKG-08-41	Resistor (Cement)	1	22Ω 5W ± 10%	
TKG-08-42	Resistor (Cement)	1	220Ω 5W ± 10%	
TKG-08-43	Variable Resistor	2	100KΩ GF06P	
TKG-08-44	Variable Resistor	2	2KΩ GF06P	
TKG-08-45	Shunt Resistor	2	5MΩ ±20%	
TKG-08-46	SC Coil	1	SC-02	
TKG-08-47	SF Coil	2	100μH 8A	
TKG-08-48	SF Coil	1	800μH 2A	
TKG-08-49	Auxiliary Power Transformer	1	EI-28 Type 3D-1000	
TKG-08-50	Oscillator Transformer	4	EE-16 Type 3D-1000	
TKG-08-51	Oscillator Transformer	1	EI-40 Type 3D-0077	
TKG-08-52	Oscillator Transformer	1	EC-35 Type 3D-0077	
TKG-08-53	Fuse Element	1	NR Type 4A	

6. SOU P.C. Board

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKG-15-00B (TKG-15-00C)	SOU P.C. Board	1	Complete Set	
TKG-15-01	IC SN74LS04	1	Hex Inverter	
TKG-15-02	IC SN74LS05	1	Hex Inverter with Open Collector	
TKG-15-03	IC SN74LS164	3	8 Bit Serial-In Parallel-Out Shift Register	
TKG-15-04	IC MB3614	1	Low Power Quadruple Operational Amplifiers	
TKG-15-05	IC LM556	1	Dual Timer	
TKG-15-07	IC SN74LS86	1	Quadruple 2-Input Exclusive OR Gate	
TKG-15-08	IC SN74LS75	2	Quadruple Bistable Latch	
TKG-15-09	IC SN74LS161	1	Synchronous Presettable 4-Bit Binary Counter W/Direct Reset	
TKG-15-10	IC SN74LS367	1	Hex Bus Driver W/3 State Output	
TKG-15-12	IC CD4049UB	2	Hex Buffer/Converter (Inverting)	
TKG-15-13	IC DAC08CQ	1	8-Bit Digital-to-Analog Converter	
TKG-15-15	IC 2716	2	EP-ROM	
TKG-15-16	IC MB8884	1	8-Bit Microprocessor	
TKG-15-18	Crystal Oscillator	1	HC-18U-182 6.00MHz	
TKG-15-26	Transistor	9	2SC1815	
TKG-15-27	Diode	10	ISS53	
TKG-15-29 B	Ceramic Capacitor	2	22pF 50V	
TKG-15-30	Ceramic Capacitor	2	0.01μF 25V	
TKG-15-31	Ceramic Capacitor	1	0.001μF 25V	
TKG-15-32	Ceramic Capacitor	15	0.068μF 25V	
TKG-15-33	Ceramic Capacitor	1	0.022μF 25V	
TKG-15-34	Electrolytic Capacitor	2	220μF 16V	
TKG-15-35	Electrolytic Capacitor	7	1μF 50V	
TKG-15-36	Electrolytic Capacitor	1	3.3μF 16V	
TKG-15-37	Electrolytic Capacitor	1	4.7μF 16V	
TKG-15-38	Electrolytic Capacitor	3	10μF 16V	
TKG-15-39	Electrolytic Capacitor	1	22μF 16V	
TKG-15-40	Electrolytic Capacitor	3	3.3μF 50V	
TKG-15-41	Electrolytic Capacitor	1	4.7μF 50V	
TKG-15-42	Electrolytic Capacitor	2	33μF 16V	
TKG-15-43	Polyester Film Capacitor	1	0.033μF 50V	
TKG-15-44	Polyester Film Capacitor	2	0.047μF 50V	

No.	Name of Parts	Q'ty	Remarks	FOB Japan per pc.
TKG-15-47	24 Pin IC Socket	1		
TKG-15-48	Resistor (Carbon)	1	120Ω ¼W ± 5%	
TKG-15-49	Resistor (Carbon)	2	150Ω ¼W ± 5%	
TKG-15-50	Resistor (Carbon)	1	750Ω ¼W ± 5%	
TKG-15-51	Resistor (Carbon)	12	1KΩ ¼W ± 5%	
TKG-15-52	Resistor (Carbon)	2	1.2KΩ ¼W ± 5%	
TKG-15-53	Resistor (Carbon)	1	3.9KΩ ¼W ± 5%	
TKG-15-55	Resistor (Carbon)	3	4.7KΩ ¼W ± 5%	
TKG-15-56	Resistor (Carbon)	2	5.1KΩ ¼W ± 5%	
TKG-15-57	Resistor (Carbon)	5	5.6KΩ ¼W ± 5%	
TKG-15-59	Resistor (Carbon)	16	10KΩ ¼W ± 5%	
TKG-15-60	Resistor (Carbon)	1	12KΩ ¼W ± 5%	
TKG-15-62	Resistor (Carbon)	1	18KΩ ¼W ± 5%	
TKG-15-63	Resistor (Carbon)	1	20KΩ ¼W ± 5%	
TKG-15-64	Resistor (Carbon)	2	27KΩ ¼W ± 5%	
TKG-15-65	Resistor (Carbon)	2	43KΩ ¼W ± 5%	
TKG-15-66	Resistor (Carbon)	8	47KΩ ¼W ± 5%	
TKG-15-67	Resistor (Carbon)	3	100KΩ ¼W ± 5%	
TKG-15-69	Resistor (Carbon)	2	2.0KΩ ¼W ± 5%	
TKG-15-70	Resistor (Carbon)	3	3.3MΩ ¼W ± 5%	
TKG-15-71	IC SN74LS00	1	Quadruple 2 Input NAND Gate	
TKG-15-72	Transistor	1	2SC2320 Rank F	
TKG-15-73	Polyester Film Capacitor	1	0.068μF 50V ± 20%	
TKG-15-74	Semi Fixed Resistor	1	10KΩ 1/5W	
TKG-15-75	Tantalum Capacitor	1	22μF 16V	